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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,366	04/16/2004	Hun Gun Park	K-0238A.02	8097
34610	7590	09/21/2004	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			GUHARAY, KARABI	
			ART UNIT	PAPER NUMBER
			2879	

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/825,366	PARK ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Karabi Guharay	2879	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 is/are allowed.
- 6) ☒ Claim(s) 7 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 8 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. 09/717,069.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/16/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, "a groove in the second dielectric layer" as claimed in claim 10, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure is objected to because of the following informalities:

On line 11 and 14 of page 13, barriers are denoted by # 21 instead of # 121.

Art Unit: 2879

Appropriate corrections are required.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Claim 10 which is dependent on claim 7, recites "a groove formed in the second dielectric layer", however, specification and drawings are not showing any groove in the second dielectric layer which is formed on the second substrate containing phosphor layer.

However, for the purpose of examination, it is understood that groove is formed on the first dielectric layer, as per specification and drawings.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 7 is rejected under 35 U.S.C. 102(b) as being anticipated by Takada (JP 11260264A).

Regarding claim 7, Takada discloses a plasma display panel (Fig 1) comprising a first substrate (10), a plurality of first substrate electrode pairs (12,13) formed on the first

Art Unit: 2879

substrate in a first direction, a first dielectric layer (15a) formed on the first substrate and the first substrate electrode pairs, a second substrate (11), a plurality of second substrate electrodes (14) formed on the second substrate to cross the first substrate electrodes (12,13) in the first direction, a second dielectric layer (15b) wherein an exhaust path (opening 19) is formed between the first and second dielectric layers (See Solution of English Abstract).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 7, 10 & 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Amemiya (US 5742122).

Regarding claims 7, 10 & 12, Amemiya discloses a plasma display device (Fig 2) comprising a first substrate (1), a plurality of first substrate electrode pairs (7) formed on the first substrate in a first direction, and a first substrate dielectric layer (23) formed on the first substrate and the plurality of the electrode pairs, a second substrate (2) a plurality of second substrate electrodes (w) formed on the second substrate in a direction to cross the first substrate electrode pair (7), barriers (31) formed the second

Art Unit: 2879

substrate (2), wherein an exhaust path (plurality of grooves, area between protruding pads 23a, which creates an exhaust path) is formed on the first dielectric layer (23), and each groove is located above a barrier (Fig 2).

But Amemiya is silent about a second dielectric layer formed on the second substrate and the second substrate electrodes.

However, in an AC plasma display it is well known that the electrodes are covered by dielectric layers, as evidenced by US 5909083. Thus it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a second dielectric layer on the second substrate and the second substrate electrode to obtain ac plasma display.

Claim 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Amemiya as applied to claim 7 above, and further in view of Amemiya (US 6525470).

Regarding claim 11, Amemiya, in patent # 5742122, discloses all the limitations of claim 11, except for the limitation that groove is formed in a discharge space between the barriers forming the exhaust path between barriers.

However, Amemiya, in Patent # 6525470, discloses a plasma display with the second dielectric region (14) having plurality of grooves (G, 21 of Fig 1 -Fig 3) defined between two protruding pad of the dielectric region (Fig 4 & Fig 5), which is centrally located between adjacent barriers 19 (see Fig 1). Amemiya teaches that this centrally located groove at the gap provides further advantage of reducing the starting voltage of the device (lines 44-51 of column 3).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have grooves in the dielectric layer, located centrally between the adjacent barriers so as to reduce the starting voltage of the device.

***Allowable Subject Matter***

Claims 1-6 are allowed over the prior art of record.

Claims 8-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 1 & 8, the prior art of record neither shows nor suggests a plasma display panel comprising all the claimed limitations of claim 1 or claim 8, particularly comprising a plurality of projections formed on the phosphor layer between the barriers.

***Other Prior Art Cited***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure : Yura et al. (US 6787978).

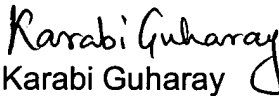
***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karabi Guharay whose telephone number is (571) 272-2452. The examiner can normally be reached on Monday-Friday 8:30 am - 5:00 pm.

Art Unit: 2879

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Karabi Guharay  
Patent Examiner  
Art Unit 2879